

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow.

No claims are currently being amended. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claims 4, 7 and 9-28 are pending in this application.

Rejection under 35 U.S.C. § 103

Claim 4, 7 and 9-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 04-249211 to Uzuki ("Uzuki") in view of U.S. Patent No. 6,243,128 to Yamakawa et al. ("Yamakawa"). Applicant respectfully traverses this rejection for at least the following reasons.

Independent claim 4 recites "a mirror provided in the vicinity of another side in the housing, which reflects the laser beam deflected by the polygon mirror at a predetermined angle to guide the laser beam outside the housing; and a projection provided on an outer surface of the housing between the polygon mirror and the mirror, wherein a central axis of the projection passes through an exposure light spot of the laser beam irradiated on the image carrier." Uzuki fails to suggest this combination of features, or its advantages.

The Office Action equates the pin 8 of Uzuki with the projection as recited in claim 4. In contrast to the structure of claim 4, however, the positioning pin 8 of Uzuki does not have a central axis which passes through an exposure light spot of a laser beam irradiated on the drum 20 of the Uzuki system.

Moreover, Uzuki fails to recognize the advantages of the structure of claim 4. Because the projection has a central axis passing through an exposure light spot of the laser beam irradiated on the image carrier, it is possible to suppress displacement of the scanning start position in the main scanning direction when the exposure device is rotated about the projection. (See specification, page 12, lines 3-15). Uzuki, by contrast, does not recognize

this advantage of arranging its pin 8 such that the pin 8 has a central axis passing through an exposure light spot of a laser beam irradiated on its drum 20. Uzuki does not contemplate rotating the housing without causing displacement of the scanning start position in the main scanning direction.

The purpose of the positioning pin 8 in Uzuki is to allow adjustment of the scanning line of the laser beam in the x direction (See partial translation of Uzuki, paragraph [0015], submitted in an Information Disclosure Statement filed concurrently with this Reply). Uzuki in no way contemplates arranging the positioning pin 8 so that its central axis passes through an exposure light spot of a laser beam irradiated on its drum 20.

In light of the advantages of the arrangement of the projection as recited in claim 4, the arrangement is more than a mere rearrangement of parts as alleged in the Office Action, and is not obvious over the disclosure of Uzuki.

Moreover, modifying the arrangement of the positioning pin 8 of Uzuki to be that of the projection of claim 1 would have rendered the Uzuki system unfit for its intended purpose. The positioning pin 8 of Uzuki is intended to allow adjustment of the scanning line of the laser beam in the x direction. Fixing the positioning pin 8 such that its central axis passes through an exposure light spot of a laser beam irradiated on its drum 20 would not have allowed for such adjustment in the x direction, and one skilled in the art would not have so modified the Uzuki system.

Yamakawa was cited for disclosing a developing device, transfer device, and fixing device, but fails to cure the deficiencies of Uzuki.

Independent claim 11 recites “a mirror provided in the vicinity of another side in the housing, which reflects the laser beam deflected by the polygon mirror at a predetermined angle to guide the laser beam outside the housing; and a projection provided on an outer surface of the housing between the polygon mirror and the mirror, wherein a central axis of the projection passes through an exposure light spot of the laser beam which is reflected by the mirror”, and is thus patentable for reasons analogous to claim 4.

New independent claims 19 and 26 respectively recite “a reflecting means, provided in the vicinity of another side in the housing, for reflecting the laser beam deflected by the deflecting means at a predetermined angle to guide the laser beam outside the housing; and a projection provided on an outer surface of the housing between the deflecting means and the reflecting means, wherein a central axis of the projection passes through an exposure light spot of the laser beam irradiated on the image carrier” and “a reflecting means, provided in the vicinity of another side in the housing, for reflecting the laser beam deflected by the deflecting means at a predetermined angle to guide the laser beam outside the housing; and a projection provided on an outer surface of the housing between the deflecting means and the reflecting means, wherein a central axis of the projection passes through an exposure light spot of the laser beam which is reflected by the reflecting means”, and are thus patentable for reasons analogous to claim 4.

The dependent claims are patentable for at least the same reasons as their respective independent claims, as well as for further patentable features recited therein.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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